

# ST7500

## COMPACT TETRA RADIO

BEING ON THE FRONTLINE DEMANDS A SPECIAL KIND OF COMMUNICATION DEVICE THAT'S EASY TO CARRY YET RUGGED AND CAPABLE ENOUGH TO GET THE JOB DONE.

The ST7500 is a compact TETRA radio that weighs less than 200 grams, making it easy to carry and easy to wear in a variety of belt or body-worn configurations. Despite its size, performance is mission-critical with leading-edge features such as Multi-Band Compression for loud and clear audio, a hybrid antenna and the latest Bluetooth® 4.1 LE technology for collaborating with a range of complementary devices and wireless accessories.

Whether responding to a riot in a town centre or dealing with a road traffic accident, the ST7500 provides public safety officers with a device that's fully capable and simple to use in the moments that matter for optimum response and safety.



### KEY BENEFITS

- Compact and lightweight
- Simple and intuitive user interface
- Bright OLED display
- Loud and clear audio
- Rugged and robust with IP65, IP67 and MIL-STD 810 D, E, F, G
- Hardware based end-to-end encryption
- Vibration alert
- MAC13 accessory connector
- Bluetooth 2.1 and 4.1 LE wireless technology
- GPS, BeiDou and GLONASS location services
- Up to 22 hours battery life
- Proprietary hybrid antenna technology
- Wi-Fi ready

## GENERAL SPECIFICATIONS

Dimensions H x W x D	112 x 63 x 22mm
Dimensions Including Antenna	139 x 63 x 22mm (28mm Antenna) 171 x 63 x 22mm (57mm Antenna)
Weight Including Battery and 28mm Antenna	197g
Battery	Removable 2300 mAh IMPRES 2 Li-Ion
Battery Performance	5-5-90 > 22 hrs 5-35-60 > 19 hrs
Audio	Audio Output Power at Rated / Max: 1 W Audio Distortion at Rated: < 1 %

## DATA AND MESSAGING SERVICES

SDS Messaging
Call-Out <sup>1</sup>
Secondary Control Channel
ETSI and Enhanced AT Commands (including Voice Control and Short Data)
TNP1 - Support Simultaneous Packet Data and Short Data Services over PEI
Wi-Fi Hardware Ready

## BLUETOOTH AUDIO AND DATA SERVICES

Bluetooth Versions Supported	Bluetooth 2.1 +EDR, Bluetooth 4.1, Bluetooth Smart (BTLE)
Bluetooth Security	Bluetooth 2.1 introduces Mandatory Encryption with Secure Simple Pairing (SSP), Easier Pairing and Preventing Sniffing / Hacking
Bluetooth Audio	Headset Profile, Fast PTT with Motorola Solutions Accessories
Bluetooth Data Services	Serial Port Profile, Dial Up Networking Profile, Discovery Mode, Generic Access Profile, Generic Attributes Profile (GATT), Heart Rate Profile, Battery Service Profile, Devices Info Profile.

## RF SPECIFICATIONS

Frequency Bands	380-430 MHz
Transmitter RF	Power Class 3L (1.8W) & Class 4 (1W)
Receiver Class	A and B
Rx Static Sensitivity (UHF)	UHF: -116 dBm (min); -118 dBm (Typical)
Rx Dynamic Sensitivity	UHF: -107 dBm (min); -109 dBm (Typical)

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature °C	-30 to +60
Storage Temperature °C	-40 to +85
Humidity	ETS 300-019-1-7 Class 7.3E, MIL-STD 810 D, E, F, G
Dust and Water Ingress Protection	IP65, IP67 per IEC 60529
Shock, Drop and Vibration	ETS 300-019 1-7 Class 5M3; MIL STD 810 D, E, F, G

## SECURITY AND SAFETY OPTIONS

Man-Down <sup>1</sup>	No movement and angle detection
PIN Lock	Personal Identification Number (PIN) and PIN Unblocking Key (PUK)
Enhanced Security - OTAR/DMO SCK	End-to-End Encryption: Motorola Solutions CRYPTR Micro Hardware Module
Authentication (Mutual)	Permanent Disable (ETSI, V2-Customer Restore)
Air Interface Encryption (ETSI / SFPG TEA Algorithms)	Temporary Disable (Stun)
Security Class	1, 2, 3 and 3G Support

## LOCATION SERVICES

Constellations Supported:	GPS, BeiDou, GLONASS Integrated Internal Antenna
Simultaneous Satellites	12
Tracking Sensitivity (dBm)	-161 GPS -156 BeiDou -155 GLONASS
Accuracy	< 5 Metre (50% Probable) @ -130 dBm
Protocols	ETSI LIP, LRRP

## MAIN VOICE SERVICES

General	Full Duplex TMO Private, PABX, PSTN, Emergency Half Duplex TMO Private, Group, Emergency Half Duplex DMO Private, Group, Emergency	Inter-MNI, Gateway, Repeater Compatible PTT Double Push Adaptive Audio Gain Control (AGC)
Emergency Call Management	Tactical Emergency Group Call to ATTACHED talkgroup Non-Tactical Emergency Group Call to DEDICATED talkgroup HOT MIC Emergency - hands free in moments that matter	Emergency Status Message sent to Dispatch Console Pre-emptive Priority Calls
DMO Repeater and Gateway Services	Works with DMO Repeaters and Gateways <sup>2</sup>	

<sup>1</sup> Licensed Feature

<sup>2</sup> Does not Work as a DMO Repeater

## USER INTERFACE

Display	OLED 128 x 64 Pixels, White
Hard Keys	<ul style="list-style-type: none"> <li>Emergency Button</li> <li>High Tactility PTT Button</li> <li>Power / Wakeup Button</li> <li>Talkgroup Change Rocker Switch</li> <li>Volume Up / Down</li> <li>3 User Configurable One Touch Buttons, Extensive List of Functions</li> <li>4 Menu and Navigation Keys</li> </ul>
Simplified User Interface	<ul style="list-style-type: none"> <li>Minimalistic Default Menu Structure <ul style="list-style-type: none"> <li>Favourite Talkgroups</li> <li>Favourite Contacts</li> <li>Bluetooth</li> <li>Radio Settings</li> <li>My Info</li> <li>Language Options</li> </ul> </li> <li>Menu Editor - simplify and tailor to user needs</li> </ul>

### Advanced User Interface

Talkgroups – TMO Folders: 256, TMO Unique: 10,000  
 Talkgroups – DMO Folders: 128, DMO Groups: 2,000  
 Talkgroups – Extended Folders: 330,  
 Mixed TMO/DMO Groups: up to 15 groups per folder  
 Country/Network Code List - Up to 100 by Contact or Talkgroup  
 Scan lists - 40 lists of up to 20 groups  
 Contacts - Up to 1000 with 6 numbers per Contact (Max 2000 unique numbers)  
 Fast / Flexible Call Set Up / Answer  
 Multiple ring tones possible



## ACCESSORIES

### AUDIO ACCESSORIES

PMMN4550	IMPRES Small Remote Speaker Microphone with 3.5mm Audio Jack and Emergency Button
PMLN7844	3.5mm Receive Only Earpiece with Translucent Tube (Secondary Audio Device for PMMN4550)
PMLN6900	1-Wire Receive Only Earpiece with Translucent Tube

### BLUETOOTH AUDIO ACCESSORIES

PMLN6463 <sup>3</sup>	Wireless Kit Includes a Receive-only Earpiece, Bluetooth Pod and Charging Cradle (Use PTT on Radio)
PMLN7181 <sup>3</sup>	Wireless Kit Includes a Swivel Earpiece with Boom Microphone, Bluetooth Pod and Charging Cradle (Use PTT on Radio)
NNTN8191 <sup>3</sup>	Wireless Bluetooth Push-to-Talk Pod
NTN2572	Earpiece with Integrated Microphone and 12-inch Cable (Requires NNTN8191 PTT Pod)
NNTN8294	Single Wire Earbud with Inline Microphone, 29cm Cord, Black (Requires NNTN8191 PTT Pod)
NNTN8295	Single Wire Earbud with Inline Microphone, 114cm Cord, Black (Requires NNTN8191 PTT Pod)
NNTN8433 <sup>3</sup>	Completely Discreet Wireless Surveillance Kit Includes: Wireless Neckloop Y Adapter and Retention Hook, Discreet Earpiece Kit and Wireless Push-to-Talk Pod (NNTN8191)
PMLN7851	Operational Critical Wireless Earpiece Push-to-Talk

### CARRY ACCESSORIES

PMLN7841	Carry Holster with Swivel Clip
PMLN7842	Carry Holster with Peter Jones

### BATTERIES AND CHARGERS

PMNN4510	IMPRES 2 Li-Ion 2300 mAh Battery
PMPN4373	6-Battery Multi-Unit Charger with UK Plug
PMPN4372	6-Battery Multi-Unit Charger with EURO Plug
PMPN4371	6-Battery Multi-Unit Charger with US Plug
PMPN4393	6-Device/Battery Multi-Unit Charger with UK Plug
PMPN4392	6-Device/Battery Multi-Unit Charger with EURO Plug
PMPN4461	6-Device/Battery Multi-Unit Charger with US Plug
PMPN4502	IMPRES2 Dual-Unit Charger with UK Plug
PMPN4501	IMPRES2 Dual-Unit Charger with EURO Plug
PMPN4509	IMPRES2 Dual-Unit Charger with US Plug
PMPN4447	IMPRES2 Battery Single-Unit Charger with UK Plug
PMPN4446	IMPRES2 Battery Single-Unit Charger with EURO Plug
PMPN4445	IMPRES2 Battery Single-Unit Charger with US Plug

### ANTENNAS

AN000169A01	Antenna 380-430 MHz - 28mm
AN000262A01	Antenna 380-430 MHz - 57mm

### ANTENNA BANDS

PMLN7636	Pack of 10 Gray Antenna ID Bands
PMLN7637	Pack of 10 Yellow Antenna ID Bands
PMLN7638	Pack of 10 Red Antenna ID Bands
PMLN7639	Pack of 10 Blue Antenna ID Bands
PMLN7640	Pack of 10 Purple Antenna ID Bands

### MISCELLANEOUS

PMHN4389	Battery Cover
PMKN4203	Radio Programming Cable
PMLN7951	Pack of 50 Identification Label
HN001402A01	Dust Cover

<sup>3</sup> Requires Separate Power Supply - PS000042A12 (EURO) / PS000042A13 (UK) / PS000042A11 (US)

For more information please visit: [motorolasolutions.com/ST7500](https://motorolasolutions.com/ST7500)

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